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REMARKS

The Examiner objected to Claims 1, 2, 6-10, 17, 23 and 24 because of the word "adapted" and requested correction. Accordingly, the word has been removed from all claims.

The Examiner rejected Claims 1-3, 5, 8-16, 22 and 25-33 under 35 U.S.C. 102(a) as anticipated by Tafas et al. (U.S. Patent No. 6,320,174) and Claims 4, 6, 7, 17, 21, 23, 24 and 34 under 35 U.S.C. 103(a) as unpatentable as obvious over Tafas ('174). This reference discloses three embodiments (Figs. 1, 3 and 5) of a multi-objective microscope. Each embodiment includes a plurality of objectives and one or more sensors arranged in different manners. In the first embodiment, the objectives are adjacent to one another in a row (col. 4, line 8) and each objective is coupled directly to a corresponding sensor (col. 4, line 20). In the second embodiment, the objectives are arranged in rows (col. 5, line 19) and each objective is coupled to a single sensor through a projecting system that includes one or more optical fibers (210 in Fig. 2) and a reflector (220). In the third embodiment, each objective is coupled to a fiber-optic bundle (420 in Fig. 4) and a taper (430) delivering the image directly to the sensor (col. 6, lines 26-33).

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The Tafas patent does not disclose an embodiment wherein the objective lenses 110 are arranged in a two-dimensional array. (It is noted that the structures 210 in Fig. 3 and 420 in Fig. 4, arranged in two-dimensional arrays, are fiber-optic bundles, not arrays of microscopes.) Tafas et al. also do not describe a system capable of simultaneously operating with different imaging modalities (see col. 4, line 4-6, teaching rows of objectives with substantially the same optical characteristics). In particular, they clearly do not teach a system wherein all objectives scan the same area of the sample in different imaging modalities to produce respective images that may then be combined to form a composite image reflecting all such modalities.

The applicants have amended the claims to further define their invention to clearly reflect the features disclosed in the specification. As currently amended, Claim 1 of the present application recites, among other limitations, the following elements:

1. a plurality of two-dimensional microscope arrays;
2. different microscope arrays configured to operate according to different desired modes of operation of the imaging system during a scan of the scanning mechanism; and
3. a mode implementation system for combining the image data captured by the imaging system during the scan.

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Claim 2 further recites different microscope arrays that image the same area of the object during the scan of the scanning mechanism. None of these elements is believed to be expressly taught or present in the microscope embodiments disclosed by Tafas et al.

While this reference describes an array of objectives which could be argued to meet broadly the claim language of a microscope array (see col. 4, lines 4-5), it cannot fairly be said that the reference describes a plurality of two-dimensional microscope arrays. As defined by the applicants (see the end of Paragraph 5 of the publication) and used consistently throughout the specification, such arrays are microscope units wherein each includes multiple objectives arranged in a two-dimensional array. Therefore, while in a very broad sense Tafas et al. may be found to teach the use of a single two-dimensional array of objectives, there is no teaching in the reference of a plurality of such two-dimensional arrays (used simultaneously in different modes of operation, as detailed below).

The second distinguishing feature is at the heart of the present invention. Each two-dimensional array is a distinct module operating according to a different modality of illumination and/or optical configuration during the same scan of the imaging system, thereby substantially simultaneously providing separate

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images of the same sample area under different operating modalities. There is no teaching of this feature in the Tafas patent, nor could the composite microscope taught in the patent be operated under more than one modality during a scan (see col. 4, lines 4-6). Therefore, since there is no need for it, the patent also does not teach the third limitation, that is, a mode implementation system for combining the image data captured by the imaging system during the scan.

Finally, the microscope objectives of the Tafas invention are clearly designed to simultaneously image separate areas of the sample surface. That is, the area of the surface covered by each field of view is not imaged by the field of view of any other objective during a scan (see Fig. 2 and col. 4, line 60, to col. 5, line 2, for clear evidence of this proposition). Therefore, the additional claim limitation that different microscope arrays image the same area of the object during the scan of the scanning mechanism is also not only absent in the patent, but it is actually contrary to the express teaching of this reference.

In view of the foregoing, the applicants respectfully submit that three elements of Claim 1 and four elements of Claim 2, as amended, are not present in the Tafas reference. Accordingly, these claims are not believed to be anticipated and are believed to be in allowable form.

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Method Claim 18 has also been amended to recite essentially the same limitations expressed in items 1-3 above and added to Claim 1, and Claim 19 has been amended to add the same limitation of Claim 2. Therefore, these method claims, as amended, are also believed to recite allowable subject matter. The same arguments offered above to distinguish Claims 1 and 2 apply with regard to Claims 18 and 19.

In view of the added recitation of "microscope arrays" in amended Claims 1-2 and 18-19, the applicants have cancelled Claims 9-16 and 26-33, without prejudice. All other dependent claims, except Claims 7 and 24, have been amended to conform to the new language introduced by amendment in the claims from which they depend. In addition, Claim 5 has been amended to recite object "surfaces" instead of object "plane" to reflect the fact that the object surface is not necessarily plane, as recognized in the specification of the invention (in Paragraph 112 of the Publication).

In view of the foregoing, the applicants believe that all remaining claims are in allowable form and respectfully request reconsideration of the rejections.

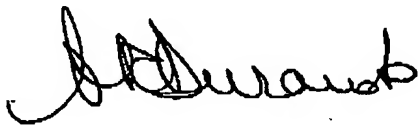
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The applicants and their attorney undersigned thank the Examiner for his thorough examination and citation of relevant prior art.

A request for a three-month extension of time to respond to the office action is attached with authorization to charge the small-entity fee to our deposit account. Please charge this amount, and any other amount deemed to be due with this response, to our Deposit Account No. 17-0055.

Respectfully submitted,



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